MITSUBISHI DIODE MODULES

RM150DZ/CZ/UZ-M,-H,-24,-2H

HIGH POWER GENERAL USE
INSULATED TYPE

RM150DZ/CZ/UZ-M,-H,-24,-2H



(DZ Type)

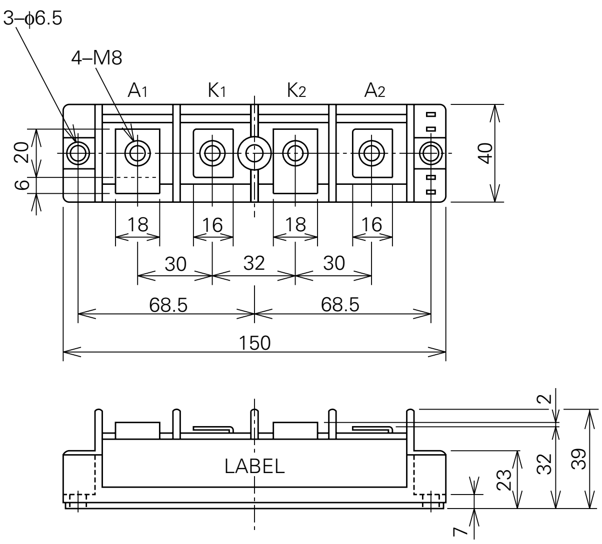
- **$I_{F(AV)}$** Average forward current **150A**
- **V_{RRM}** Repetitive peak reverse voltage **400/800/1200/1600V**
- **DOUBLE ARMS**
- **Insulated Type**
- **UL Recognized**
  Yellow Card No. E80276 (N)
  File No. E80271

APPLICATION

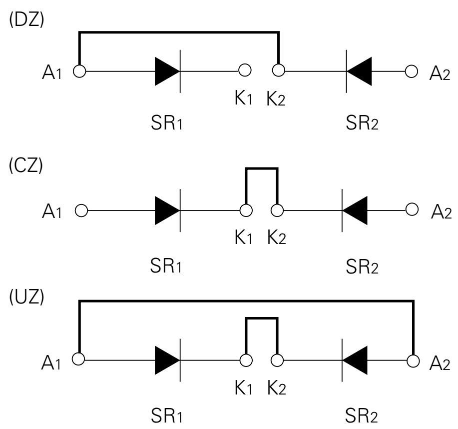
AC motor controllers, DC motor controllers, Battery DC power supplies,
DC power supplies for control panels, and other general DC power equipment

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



(DZ Type)



(Bold line is connective bar.)

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Voltage class				Unit
		M	H	24	2H	
V_{RRM}	Repetitive peak reverse voltage	400	800	1200	1600	V
V_{RSM}	Non-repetitive peak reverse voltage	480	960	1350	1700	V
$V_{R\,(DC)}$	Reverse DC voltage	320	640	960	1280	V

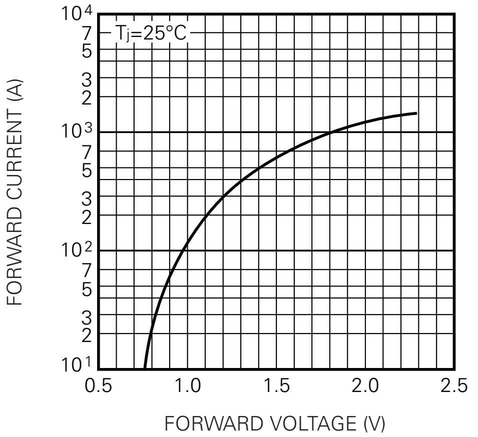
Symbol	Parameter	Conditions	Ratings	Unit
$I_{F\,(RMS)}$	RMS forward current		235	A
$I_{F\,(AV)}$	Average forward current	Single-phase, half-wave 180° conduction, T_C=109°C	150	A
I_{FSM}	Surge (non-repetitive) forward current	One half chcle at 60Hz, peak value	3500	A
I^2t	I^2t for fusing	Value for one cycle of surge current	5.1×10^4	A^2s
f	Maximum operating frequency		1000	Hz
T_j	Junction temperature		–40~+150	°C
T_{stg}	Storage temperature		–40~+125	°C
V_{iso}	Isolation voltage	Charged part to case	2500	V
—	Mounting torque	Main terminal screw M8	8.83~10.8	N·m
			90~110	kg·cm
		Mounting screw M6	1.96~3.92	N·m
			20~40	kg·cm
—	Weight	Typical value	300	g

ELECTRICAL CHARACTERISTICS

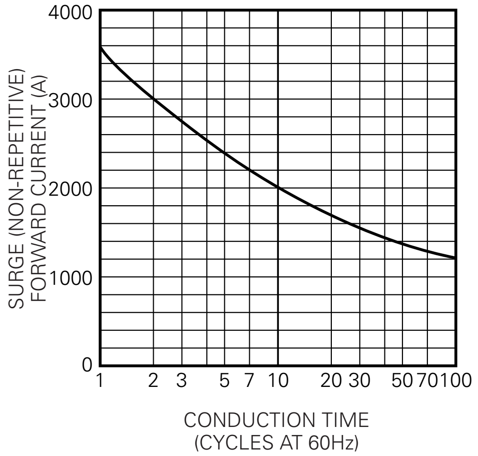
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive reverse current	T_j=150°C, V_{RRM} applied	—	—	30	mA
V_{FM}	Forward voltage	T_j=25°C, I_{FM}=450A, instantaneous meas.	—	—	1.35	V
$R_{th\,(j\text{-}c)}$	Thermal resistance	Junction to case (per 1/2 module)	—	—	0.22	°C/W
$R_{th\,(c\text{-}f)}$	Contact thermal resistance	Case to fin, conductive grease applied (per 1/2 module)	—	—	0.1	°C/W
—	Insulation resistance	Measured with a 500V megohmmeter between main terminal and case	10	—	—	MΩ

PERFORMANCE CURVE

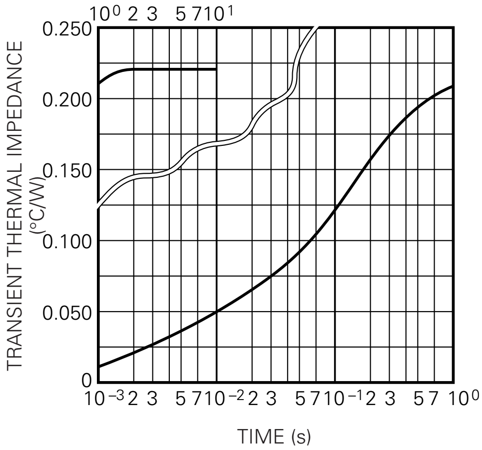
MAXIMUM FORWARD CHARACTERISTIC



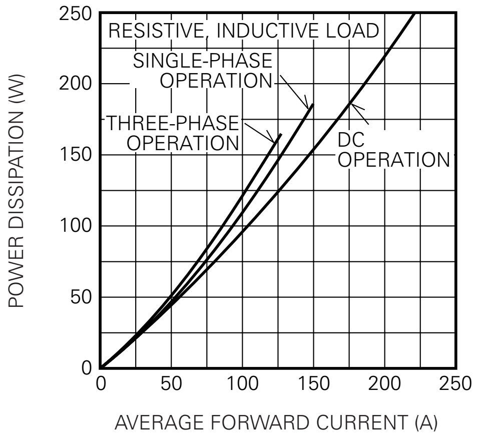
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT

